<u>ATTENDEES</u>

OCS Scientific Committee Members

- Dr. Michael Castellini, University of Alaska Fairbanks
- Dr. Robert Diaz, Virginia Institute of Marine Science
- Dr. Duane Gill, Mississippi State University
- Dr. Richard Hildreth, University of Oregon
- Dr. Charles Marek, Vulcan Materials Company
- Dr. Livingston Marshall, Morgan State University
- Dr. Michael Rex, University of Massachusetts
- Dr. Edella Schlager, University of Arizona
- Dr. Mary Scranton, State University of New York
- Dr. Lynda Shapiro, University of Oregon
- Dr. Joseph Smith, ExxonMobil Upstream Research
- Dr. Denise Stephenson-Hawk, The Stephenson Group
- Dr. John Trefry, Florida Institute of Technology

Minerals Management Service

- Dr. Tom Ahlfeld, Environmental Sciences Branch
- Ms. Carolyn Beamer, Offshore Minerals Management
- Ms. Colleen Benner, Environmental Sciences Branch
- Dr. Mary Boatman, Environmental Sciences Section, Gulf of Mexico OCS Region
- Mr. Greg Boland, Environmental Sciences Section, Gulf of Mexico OCS Region
- Ms. Elizabeth Burkhard, Environmental Sciences Branch
- Ms. Robin Cacy, Public Affairs, Alaska OCS Region
- Ms. Jane Carlson, Procurement Operations Branch
- Ms. Phyllis Clark, Environmental Sciences Branch
- Dr. Cleve Cowles, Environmental Studies Section, Alaska OCS Region
- Mr. Barry Drucker, International Activities and Marine Minerals
- Ms. Mary Elaine Dunaway, Environmental Sciences Section, Pacific OCS Region
- Mr. John Goll, Alaska OCS Region
- Mr. Tim Holder, Environmental Studies Section, Alaska OCS Region
- Ms. Cheri Hunter, Offshore Minerals Management
- Mr. Warren Horowitz, Environmental Studies Section, Alaska OCS Region
- Dr. Jim Kendall. Environmental Sciences Branch
- Mr. Robert LaBelle. Offshore Minerals Management
- Dr. Ron Lai, Environmental Sciences Branch
- Dr. Alexis Lugo-Fernandez, Environmental Sciences Section, Gulf of Mexico OCS Region
- Dr. Harry Luton, Environmental Sciences Section, Gulf of Mexico OCS Region
- Dr. Charles Monnett, Environmental Studies Section, Alaska OCS Region
- Mr. Tom Newberry, Environmental Studies Section, Alaska OCS Region
- Mr. Richard Newman, Environmental Studies Section, Alaska OCS Region
- Dr. Fred Piltz, Environmental Sciences Section, Pacific OCS Region

- Dr. Dick Prentki, Environmental Studies Section, Alaska OCS Region
- Ms. Julie Reynolds, Offshore Minerals Management
- Dr. Pat Roscigno, Environmental Sciences Section, Gulf of Mexico OCS Region
- Mr. Paul Stang, Leasing and Environment, Alaska OCS Region
- Mr. Steve Treacy, Environmental Studies Section, Alaska OCS Region
- Ms. Lynette Vesco, Office of Environmental Evaluation, Pacific OCS Region
- Mr. Will Waskes, International Activities and Marine Minerals
- Ms. Kate Weidemeyer, Environmental Studies Section, Alaska OCS Region
- Dr. Dee Williams, Environmental Studies Section, Alaska OCS Region

Invitees

- Dr. Vera Alexander, University of Alaska Fairbanks
- Mr. John Brown, Battelle Coastal Resources and Environmental Management
- Dr. Brendan Kelly, University of Alaska Southeast & University of Alaska Fairbanks
- Dr. Steve Okkonen, University of Alaska Fairbanks
- Dr. W. John Richardson, LGL Ltd.
- Mr. Larry Schmidt, OCS Policy Committee, New Jersey Department of Environmental Protection
- Dr. William Schroeder, OCS SC Mercury Subcommittee Chair, University of Alabama
- Mr. Edward Rasmuson, U.S. Commission on Ocean Policy
- Dr. Larry Rouse, University of Louisiana
- Dr. John Russell, EDAW
- Dr. Thomas Weingartner, University of Alaska Fairbanks

Others

Mr. Bern Shanks, U.S. Geological Survey

Ms. Pam Miller, Arctic Connection

MEMBERS OF THE MINERALS MANAGEMENT ADVISORY BOARD OCS SCIENTIFIC COMMITTEE

CASTELLINI, Dr. Michael Angelo

Dr. Castellini is the Director of the Institute of Marine Science, University of Alaska Fairbanks. Projects focus on many different aspects of marine mammal biology. Some of these include nutritional physiology of harbor seals and Steller sea lions in Alaska as related to their population declines and to the survival of seal and sea lion pups. Other projects include studies on lipid metabolism in marine mammals, the biochemistry of contaminants, metal chemistry, anti-oxident chemistry and immune function. These programs are both field based from the Arctic to the Antarctic and conducted in collaboration with marine laboratories throughout North America.

COLEMAN, Dr. James M.

James M. Coleman is the discretionary member to the OCS SC and is a Boyd Professor for the Coastal Studies Institute and recently served as Interim Vice-Chancellor for Research and Graduate Studies at Louisiana State University. He started his professional career as a graduate student at Coastal Studies Institute, LSU, and eventually serving as director of CSI, chairman of Geology and Geophysics, head of the School of Geoscience, and interim dean of Basic Sciences before being named Executive Vice-Chancellor in 1989. He has conducted worldwide research on deltaic sedimentation, riverine processes, marine geology, shallow structure of shelf sediments, and muddy coasts. He serves on numerous local, state, and national committees and is presently a member of the Ocean Studies Board, National Research Council, and has recently been appointed to the U.S. Commission on Ocean Policy.

DIAZ, Dr. Robert J.

Dr. Diaz's research interests center around understanding trophic dynamics and the functional importance of production in ecosystems, benthic boundary layer processes, and organism-habitat interactions, and how perturbations of these processes influence energy flow and population dynamics. Recently he has focused on organism-habitat interaction on the inner continental shelf to predict how sand dredging will affect fish and invertebrate communities. He is striving to estimate the relative resource value of various estuarine and marine benthic habitat types for the dual purpose of quantifying energy flow between habitats and for developing environmentally sound management strategies. This research has led him to consider a landscape ecological approach to looking within and between systems around the U.S. for how the physical and biological processes interact. In addition, he is also interested in the application of the statistical and numerical methods to biological data and in the ecology and taxonomy of estuarine and marine invertebrates with specialization in oligochaetes.

GILL, Dr. Duane A.

Dr. Gill is Professor of Sociology in the Social Science Research Center and Department of Sociology, Anthropology and Social Work at Mississippi State University. He has conducted research on the *Exxon Valdez* oil spill, Gulf of Mexico fisheries, and various environmental issues in Mississippi. His research interests include the study of technological disasters, natural resource management, and community.

GOLDSMITH, Dr. Oliver Scott

Dr. Goldsmith is the Director of the Institute of Social and Economic Research and a Professor of Economics at the University of Alaska Anchorage. During his 28 years at the Institute.

Dr. Goldsmith has concentrated his research on the structure of the Alaska economy, Alaska fiscal policy, and energy supply and demand.

HILDRETH, Dr. Richard

Dr. Hildreth is the author of three casebooks and many other publications on ocean and coastal law. He has consulted frequently with federal and state coastal management agencies in the U.S. and Australia and with Pacific Island governments on environmental legal matters. Dr. Hildreth served as the University of Queensland Law Faculty's 50th Anniversary Visiting Fellow. He has served on the National Research Council's Non-mature Oysters and Coastal Ocean Committees, the Pacific Northwest Regional Marine Research Board, and the editorial advisory boards of the journals Coastal Management and Ocean Development and International Law. Dr. Hildreth practiced business law with Steinhart & Falconer in San Francisco before teaching law.

KOSRO, Dr. P. Michael

Dr. Kosro is an Associate Professor of Oceanography at Oregon State University. His research focus is coastal physical oceanography. Since 1997, his group has employed a growing array of HF radiowave systems for time-series mapping of the surface circulation over the Oregon shelf and slope, for a region presently 400x150 km. He also makes conventional moored and shipborne measurements. Recent studies include the circulation changes off Oregon associated with the 1997-98 El Nino, the mesoscale features of the upwelling circulation, California Current and undercurrent, and spatial mapping of tidal flows.

MAREK, Dr. Charles R.

Dr. Marek has been employed by Vulcan Materials Company (VMC) since October, 1972. He began his career with VMC as a Construction Materials Engineer, became a Senior Materials Engineer, and in 1986 was promoted to Technical Director, a position he held for 10 years. As Technical Director, he was responsible for the technical and administrative activities of the corporation's research and development department.

Since 1996, Dr. Marek has been the Principal Materials Engineer for the Company, and works at the VMC Technical Services Center located in Birmingham, Alabama. He actively participates in and promotes research by industry, universities, public funded agencies, and trade associations on select projects and problems/ opportunities of interest and importance to Vulcan and to the aggregate and construction industry in general. He provides liaison and representation with numerous technical organizations, research programs, and committees for the purpose of developing sound technical information on crushed stone/aggregates and promoting improved/more suitable specifications and test methods for these materials and for end-use products made with the materials. Dr Marek was on the academic and research staff of the Civil Engineering Department of the University of Illinois at Champaign-Urbana, Illinois, from 1963 until joining VMC in 1972.

MARSHALL, Dr. Livingston S., Jr.

Dr. Marshall received his B.S. in Marine Science from Hampton University (1985), and a Ph. D. in Marine Science from the School of Marine Science, Virginia Institute of Marine Sciences, The College of William and Mary (1992). He has 12+ years of research experience working in sub-tropical marine and estuarine systems. His current research activities are focused on food web dynamics, applied fishery ecology and conservation biology, with research support from several funding agencies including NOAA, EPA, and Maryland Department of Natural Resources. In 1998, Dr. Marshall was appointed Associate Professor in the Biology Department, Morgan State University, Baltimore, Maryland. This appointment followed a similar appointment at Clark Atlanta University, Atlanta, Georgia, and a previous appointment as Assistant Professor and Director, the Combined BS/MS Program in Marine, Estuarine and Environmental Sciences, Department of Natural Sciences, University of Maryland at Eastern Shore. In 1998, Dr. Marshall was also appointed Research Associate at the Smithsonian Environmental Research Center. In addition to his research, teaching, and outreach responsibilities at Morgan State University,

Dr. Marshall maintains a very active program involving undergraduate and graduate student training with a focus on expanding opportunities for underrepresented individuals in Marine and Environmental Sciences.

REX, Dr. Michael A.

Dr. Rex's research is centered on the ecology and evolution of deep-sea benthic communities. It includes analyses of bathymetric and global-scale patterns of biodiversity and their causes. We are using satellite imagery to examine the relationship of surface production to community structure in the deep sea at different temporal and spatial scales. Geographic variation in body size of mollusks is being explored to study adaptation to the deep-sea environment. Multivariate analyses of shell architecture and mitochondrial DNA are being employed to study patterns of population differentiation in deep-sea mollusks. Adaptive radiation and taxon cycles are being investigated by documenting patterns of taxonomic diversity. A major long-term research goal is to synthesize patterns of distribution, geographic variation, taxonomic composition and life histories to formulate a model of evolution in deep-sea invertebrates.

SCHLAGER, Dr. Edella C.

Dr. Schlager is an Associate Professor in the School of Public Administration and Policy at the University of Arizona. She holds a Ph.D. in Political Science from Indiana University. Her research centers on local community management of natural resources, such as watersheds in the western United States and coastal fisheries.

SCRANTON, Dr. Mary I.

Dr. Scranton is interested in the factors controlling the cycling of organic compounds in sediments and in the water column. Since fatty acids and methane are important in the anaerobic decomposition of organic macromolecules, she has been studying the processes controlling the cycling of these compounds in both water column and sediment environments. She and

Dr. Gordon Taylor are collaborating with Drs. Frank Muller-Karger of the University of South Florida and Robert Thunell of the University of South Carolina, along with scientists from the Fundación la Salle and the Universidad de Oriente in Venezuela, on CARIACO (Carbon Retention in a Colored Ocean) program, a study of carbon cycling in the Cariaco Basin, Venezuela. The Marine Sciences Research Center component of the study is using a variety of techniques (including measurements of fatty acid concentrations and turnover rates (Scranton), and measurements of bacterial abundance and production and chemosynthesis (Taylor) to determine how bacterial activity is influenced by carbon supply (primary production, particle flux, chemoautotrophic production under suboxic conditions), and oxygen content. She also has a long-standing interest in methane geochemistry and is investigating the role of seeps and vents, and possibly of destabilizing gas hydrates, in controlling water-column methane concentrations near the US North-East continental shelf.

SHAPIRO, Dr. Lynda P.

After completing her Ph.D. at Duke University, Dr. Shapiro worked at the Woods Hole Oceanographic Institution, the Bigelow Laboratory for Ocean Sciences, and the University of Oregon. She directed the University's marine laboratory, the Oregon Institute of Marine Biology, from 1990 to 2001, and continues there as a Professor of Biology. Dr. Shapiro's research centers on the biology of pelagic marine phytoplankton. In recent years, she has focused on the distributions and abundances of the eukaryotic ultraplankton, on incorporation of these minute cells into the microbial food web, and on the role of associated bacteria on the nutrition of phytoplankton. She also is interested in harmful algal blooms and in the sustainable harvesting of marine macroalgae.

SMITH, Dr. Joseph Patrick

Dr. Smith is group leader for environmental technology research at ExxonMobil Upstream Research Company. He holds a Ph.D. in physical chemistry from the University of California at Berkeley (1978) and a B.S. in chemistry from the University of Rochester (1972). He joined Exxon Production Research Company in 1981 and has been active in research on the environmental aspects of offshore oil and gas operations since 1990. Recognized as an expert on the modeling of offshore discharges and on the

environmental fate and effects of drilling and production discharges, he is currently involved in research on the environmental fate of synthetic based drilling fluids, the fate of mercury in drilling wastes, and oil spill response techniques for deepwater and arctic environments. He has also chaired or served on the steering groups for many joint industry environmental studies sponsored by organizations such as the American Petroleum Institute, the Offshore Operators Committee, the International Association of Oil and Gas Producers and the Petroleum Industry Operators Environment, Health, and Safety Committee (Angola).

STEPHENSON-HAWK, Dr. Denise M.

Dr. Stephenson-Hawk chairs a consulting group assisting organizations with the application and use of science for purpose of strategically influencing policy and organizational and resource allocation decisions. She has served as an ocean systems analyst at AT&T Bell Laboratories, an atmospheric scientist at the National Aeronautics and Space Administration's (NASA) Langley Research Center, and as professor, chair and provost within academia. She has served as a principal investigator for research funded by the National Science Foundation (NSF), NASA, U. S. Department of Energy and the U.S. Department of Education. She has also been appointed to national committees that include the NSF's Geosciences Advisory Committee, NASA's Earth Systems Science Applications Advisory Committee, the

appointed to national committees that include the NSF's Geosciences Advisory Committee, NASA's Earth Systems Science Applications Advisory Committee, the Ocean Research Advisory Panel of the National Ocean Partnership Program and the National Oceanic and Atmospheric Administration's Science Advisory Board. She has worked with educators at the K-12 level, serving as co-chair for statewide (Georgia) workshops for K-12 teachers of mathematics and science and as co-principal investigator for an NSF-funded Urban Systemic Initiative in Atlanta, Georgia.

TREFRY, Dr. John H.

Dr. Trefry is a Professor of Chemical Oceanography at Florida Institute of Technology. His research activities focus on the concentrations and cycling of trace metals in rivers, estuaries, oceans and deep-sea hydrothermal vents. Trace metals are studied for their natural value and for their potential as pollutants. Dr. Trefry's research activities are carried out in a wide variety of geographical settings including the Pacific and Atlantic Oceans, the Alaskan Arctic, the Gulf of Mexico and the Indian River Lagoon, Florida.

MINERALS MANAGEMENT SERVICE (MMS) Personnel Who Interact with the OCS Scientific Committee April 22-24, 2003

BURTON, Rejane "Johnnie" – Director

Ms. Burton's appointment as Director, Minerals Management Service, became effective on March 15, 2002.

Ms. Burton's background provides a solid mix of experience in state government, the oil and gas industry, and education. Since 1995, she served on the governor of Wyoming's cabinet as director of the Department of Revenue. Before that, she served (1989-92) as vice-president of TCF Inc., an oil and gas exploration company based in Casper, Wyoming.

Prior to that, she was vice president of Dwights Energydata Inc., an information company specializing in oil and gas databases. Ms. Burton was also president and founder of Hotline Energy Reports Inc., which later merged with Dwights Energydata Inc. Under her leadership, Hotline Energy Reports Inc. built a historical database of all wells drilled for oil and gas in the 11 Rocky Mountain States. Ms. Burton began her career in the oil and gas industry as an oil scout in Casper, Wyoming, for Rinehart Oil News of San Antonio, Texas.

From 1982 through1988, Ms. Burton was a member of the Wyoming State House of Representatives. She served as a member of the Wyoming State Advisory Council of Education Grants (1986-88), and also as director of the First Wyoming Bank in Casper from 1981 through 1984. She served as a member of the Independent Petroleum Association of Mountain States Speaker's Bureau from 1977 through1979.

Her career highlights also include positions as a lecturer and teacher of French at the university and high school levels and as a translator and interpreter for the J. F. Pritchard Company in Paris, France, and Kansas City, Kansas. In1987, she was honored as a "Friend of Education" by the Wyoming School Boards Association.

Ms. Burton is a member of the National Order of Women Legislators and the American Association of Translators. She is also a member of the National Alcohol Beverage Control Association and served as its president, representing Wyoming from 2000 to 2001.

Born in French Algeria, Ms. Burton immigrated to the United States in 1963 and became an American citizen in 1968. In 1958, she completed the Baccalaureat de l'Enseignement Secondaire (option Philosophie) from the Lycee Fromentin in Algiers, Algeria. She completed the Licence-es-Lettres, English, Diplome d'Enseignment from the Universities of Algiers in Algeria and in Paris, France, in 1962. She holds a master's degree (1974) from the University of Wyoming. She studied at the University of

Arkansas and has completed management training by The Presidents Association and Duke University.

READINGER, Thomas – Associate Director for OMM

Mr. Readinger is the Associate Director of the Offshore Minerals Management Program.

Prior to this new appointment, Mr. Readinger was the Deputy Associate Director of OMM and was responsible for managing Outer Continental Shelf resources to ensure environmental protection, safe operations and receipt of fair market value for OCS resources. In that capacity, he also served as the chairman of the OMM Information Management Committee and led the OMM effort to develop the new e-Government Transformation proposal to increase the efficient and effective delivery of services to agency stakeholders.

Mr. Readinger has been involved with the OCS program for 26 years. He joined the Federal Government in 1976 as an economist with the Bureau of Land Management where he was responsible for developing bidding systems and bid adequacy procedures to ensure fair market value for OCS resources. From 1987 to 1997, he served as Program Director for the Office of OCS Program Development and Coordination, where he developed and implemented the OCS 5-year Oil and Gas Leasing Program for MMS.

In 1995, Mr. Readinger was awarded the Department of the Interior's Meritorious Service Award for career-long contributions to the development of procedures to ensure fair market value for public resources. Since being promoted to the Senior Executive Service in 1987, he has received numerous performance awards for contributions to program management and information technology advancements.

Mr. Readinger received a B.S. degree in Business Management from the Indiana University of Pennsylvania in 1972 and an M.A. degree in Economics from American University in 1974. He received his Senior Executive Certification in Public Administration from George Washington University in 1987.

LABELLE, Robert P.

Mr. LaBelle, as the Deputy Associate Director for Offshore Minerals Management, serves as Chief Operating Officer for the management of all facets of the Offshore Program, including policy development, policy implementation, and program planning. He is responsible for directing the implementation of Offshore's Strategic Plan and serves as Executive Secretary for the Offshore Steering Committee, as well as Chairman of the Offshore Information Management Committee.

Previously, as Chief of the MMS Environmental Division, Mr. LaBelle was responsible for offshore oil and gas industry compliance with all environmental requirements, including water and air quality, endangered species, oil spill risk analysis, and archaeology, in all U.S. Federal waters. He oversaw a large environmental research program and the preparation of Environmental Impact Assessments and other decision documents used for both offshore energy and mining activities.

In prior positions, Mr. LaBelle was Chief of the MMS Technology Assessment and Research Branch, where he led research on engineering and technical aspects of offshore production and development. Previous positions at MMS and USGS include Chief of the Environmental Operations and Analysis Branch, and Chief of the Branch of Environmental Modeling. Prior to joining Interior, Mr. LaBelle worked for Martin Marietta Corp. as an environmental analyst on the siting of electrical power plants and on assessing the effects of nuclear power stations on aquatic species. Mr. LaBelle is a graduate of the University of Massachusetts (BS), the University of Maryland (MS), and Loyola College (MBA).

AHLFELD, Thomas E.

Dr. Ahlfeld is a Biological Oceanographer in the MMS Environmental Sciences Branch. He has over 25 years experience in marine environmental research with emphasis on benthic ecology, marine environmental monitoring, and biological effects of offshore oil and gas development. He holds a B.S. degree in biology from Loyola University (New Orleans) and M.S. and Ph.D. degrees in biological oceanography from Florida State University. Dr. Ahlfeld serves on several U.S. interagency panels dealing with diverse marine environmental issues including invasive species, coral reef protection, and ecosystem management and served on the science advisory panel for Mote Marine Laboratory of Sarasota, Florida. Dr. Ahlfeld recently published on resource management applications of environmental research on chemosynthetic communities associated with hydrocarbon seeps in the Gulf of Mexico and is currently serving as Team Leader for the MMS Environmental Monitoring Working Group.

BENNER, Colleen (Lee) S.

Ms. Benner is an Oceanographer in the Environmental Sciences Branch, Herndon, Virginia.

She is the office specialist for efforts and studies dealing with endangered marine species as well as non-endangered or threatened marine mammals, birds, and fish. Her responsibilities include formulating and recommending environmental studies that support the MMS environmental program and oversees projects as MMS Contracting Officer's Technical Representative or Contract Inspector. In addition to Ms. Benner's responsibilities in developing and supporting studies, she also serves as the Branch representative on several interagency working groups addressing various marine environment related issues.

BOATMAN, Mary

Dr. Boatman is the supervisor of the Studies Coordination Unit in the Leasing and Environment Division of the Gulf of Mexico OCS Region. She serves as a Contracting Officer's Technical Representative for a number of Environmental Studies Program contracts related to fates and effects and chemical issues in the Gulf. She co-authored the white paper "Ocean Gas Hydrates Research and Activities Review." She has a Ph.D. in chemical Oceanography from Texas A&M University.

BOLAND, Gregory S.

Mr. Boland is a Biological Oceanographer/Fishery Biologist in the Environmental Sciences Section, MMS New Orleans. He came to MMS in 1998 with an M.S. in biological oceanography from Texas A&M University. His areas of interest include deep-sea biology, coral reef ecology, artificial reef ecology, and fishery biology. His professional career includes 10 years with the consulting firm LGL Ecological Research Associates where he was involved as Principal Investigator for many of the major MMS-funded Gulf studies in the 1980's, and 10 years with the Texas A&M Department of Oceanography where he worked with Dr. Gil Rowe in a variety of benthic ecology studies worldwide. He is also an active member of the MMS Dive Team using diving as an additional facet of studies management as well as for environmental compliance monitoring.

BURKHARD, Elizabeth

Ms. Burkhard is a Marine Biologist in the MMS Environmental Sciences Branch. She holds a B.S. degree in Biology from the College of William and Mary and an M.S. degree in Marine Science from the University of South Florida, St. Petersburg. Ms. Burkhard serves on the interagency committee to implement the Executive Order on Marine Protected Areas. She is also responsible for the management of contractual and financial information for the Studies Program and is involved in program policy.

CARLSON, Jane

Ms. Carlson is the Team Lead for Minerals Management Service. She is a contracting Officer with 30 years of government contracting experience. Her procurement background covers a wide range of complex contracts, grants, and cooperative agreements including research and development, statistical surveys and analyses, vessel and aircraft charters, environmental, oceanographic and atmospheric surveys, transportation studies, and major electronic system programs for the acquisition of advanced automation systems.

COWLES, Cleve

Dr. Cowles is Chief, Environmental Studies Section, Alaska OCS Region. His responsibilities include managing a multi-disciplinary staff to implement the Alaska environmental studies portion of the MMS ESP. Dr. Cowles has been with the Alaska OCS Region since 1979, serving as Chief of the Environmental Studies Unit from 1983-1995, and as Acting Chief of the Social and Economic Studies Unit from 1992-1995.

DRUCKER, Barry S.

Mr. Drucker is a Physical Scientist, Office of International Activities and Marine Minerals. He is responsible for formulating and recommending environmental studies in support of the MMS marine minerals program and for negotiating leases for the use of Federal sand for beach and coastal restoration efforts. He develops statements of work

for funded studies and oversees projects as MMS Contracting Officer's Technical Representative, as well as working with various Federal, State, and local entities in the development of negotiated sand leases, environmental stipulations, and NEPA documents.

DUNAWAY, Mary Elaine

Mary Elaine Dunaway is a biologist in the Environmental Studies Section in the Pacific Region. She oversees contracts pertaining to biology and fates and effects. Mary Elaine also team-leads MINT, the MMS inhouse Intertidal Team. MINT collects data at 20 rocky intertidal sites adjacent to OCS platforms in the tri-County area and conducts independent research. Current responsibilities include oversight of MARINE, the Multi-Agency Rocky Intertidal Network. MARINE is a partnership of agencies and universities who monitor rocky intertidal communities off California. MARINE with its 20 members and partners now monitor 70 fixed sites biannually from Oregon to San Diego, and conduct periodic comprehensive sampling from Washington to the mainland of Mexico. Protocols are standardized and data is placed in a shared database. Mary Elaine provides expertise to joint State/Federal oil spill efforts, particularly as it relates to groundtruthing the presence of biological resources during a spill or drill. She has initiated a new educational curriculum which presents math and scientific method concepts through the tidepool and is working with several Federal agencies on joint education workshops for science teachers.

GOLL, John

Mr. Goll is the Regional Director of the MMS Alaska Outer Continental Shelf Office, since May 1997. He is responsible for oil and gas and other mineral leasing and oversight of industry activities on the outer continental shelf off Alaska. This ranges from assessments of the oil and gas resources, preparation of environmental analyses and research, coordinating with local, state, tribal, and federal governments, and others interested in the OCS program, and assuring that exploration and development on the federal OCS is done safely and in the best interest of the United States. Prior to becoming Regional Director, Mr. Goll headed the MMS's national environmental office and was responsible for the agency's nationwide environmental program, including NEPA and research. He was closely involved with the National Research Council and GAO committees which reviewed MMS's environmental studies program, and represented MMS on the Council's Ocean Studies Board project on improving the use of science in decision making for coastal issues. He has participated in training missions with Russian environmental regulators in northwest Siberia and on Sakhalin Island. He also worked as a meteorologist with the U.S. Geological Survey and the U.S. Nuclear Regulatory Commission, working on air quality modeling and assessments. Mr. Goll holds a Bachelors Degree in Meteorology and Oceanography and a Masters Degree in air pollution meteorology, both from the University of Michigan.

HOLDER, Timothy R.

Mr. Holder has been a Contracting Officer's Technical Representative for economic studies and economist writing economic impact analysis for Environmental Impact

Statements for the MMS, Alaska OCS Region, since 1990. Previously, he was a coordinator of local, state, and federal agencies and interest groups for leasing OCS for gold mining near Nome, Alaska, for the MMS. Prior to joining the MMS in 1988, Mr. Holder was a Coastal Management Planner for Nome, Alaska, and has held the position of urban planner/economist for various consultants, regional planning agencies, and local government in the Portland, Oregon, and Detroit, Michigan, areas. Mr. Holder received his B.A. in Economics from Kenyon College, Gambier, Ohio, in 1968, and his Master of Urban Planning from Wayne State University, Detroit, in 1974.

HOROWITZ, Warren L.

Mr. Horowitz is an Oceanographer with the Environmental Studies Section, Alaska OCS Region. He is responsible for formulating and recommending environmental studies in support of leasing oil and gas resources. He develops statements of work for funded studies and oversees environmental studies as an MMS Contracting Officer's Technical Representative (COTR). Disciplinary areas of expertise include geographic information systems and modeling applications for sea ice mapping, coastal oil spill trajectory models, spatial databases of oil and gas activities, and marine meteorology.

KENDALL, James J.

Dr. James J. Kendall coordinates the Environmental Studies Program (ESP) of the U.S. Department of the Interior's Minerals Management Service (MMS) and serves as Executive Secretary to the OCS Scientific Committee. The MMS ESP is tasked with providing the environmental and socioeconomic information necessary for MMS to make informed decisions concerning offshore oil and gas and marine minerals activities. Prior to joining the MMS Headquarters Office, Dr. Kendall served as the ESP Studies Chief for the MMS Gulf of Mexico OCS Regional Office in New Orleans, Louisiana. He received his bachelor's degree in biology from Old Dominion University and his Ph.D. in oceanography from Texas A&M University. Dr. Kendall has conducted marine research in the Gulf of Mexico, Caribbean, and Red Sea.

LAI, Ronald J.

Dr. Lai is a physical scientist in Environmental Sciences Branch in Herndon Office, Virginia, and is program coordinator for the Physical Oceanography and Air Quality research. He assists in the smooth and efficient running of the Environmental Studies Program. He serves in the Technical Proposal Evaluation Committee (TPEC) to award the contracts and oversights the progress of the funded studies. He also serves as the Branch's technical liaison with other federal agencies on physical science research and develops a joint program as needed.

LUGO-FERNANDEZ, Alexis

Dr. Lugo-Fernandez is an Oceanographer in the Gulf of Mexico OCS Region.

LUTON, Harry

Dr. Luton is the Gulf of Mexico OCS Region's Sociologist for MMS's Environmental Studies Program. His University of Michigan Ph.D. dissertation is on an Eskimo whaling community in northern Alaska. Dr. Luton worked for the Agency in Alaska writing social and subsistence sections of Environmental Impact Statements and Statements of Work for socioeconomic studies. He has worked in Headquarters in the Environmental Studies Branch. For the last eight years he has developing socioeconomic studies in the Gulf and on serving as a Contracting Officer's Technical Representative.

MONNETT, Charles W.

Dr. Monnett is a Marine Ecologist, Environmental Studies Section, Alaska OCS Region. He is responsible for formulating and recommending environmental studies in support of the MMS OCS leasing program. He develops statements of work for funded studies and oversees projects as MMS Contracting Officer's Technical Representative.

NEWMAN, Richard D.

Mr. Newman is a Physical Oceanographer, Alaska Outer Continental Shelf Region, Environmental Studies Section. He is responsible for recommending environmental studies in support of the MMS environmental studies program, developing statements of work for funded studies, and overseeing projects as MMS Contracting Officer's Technical Representative, as well as working in the development of environmental impact statements and other NEPA documents.

PILTZ, Fred M.

Dr. Piltz is the Chief, Environmental Studies Section, Pacific OCS Region. He is responsible for the planning, implementation, and management of the environmental studies for the Pacific OCS Region. Prior to his current position, he worked in applied environmental impact assessment research as both a taxonomic consultant and field scientist in Southern California and in the Straits of Magellan, Chile. His research experience includes laboratory work on the effects of heavy metals on marine organisms, effects of oil spills on intertidal invertebrates, and effects of municipal sewage outfalls on benthic invertebrate communities.

PRENTKI, Dick

Dr. Prentki is an Oceanographer in the Environmental Studies Section, Alaska OCS Region. His responsibilities include developing and providing technical oversight for physical and chemical oceanographic studies in the Alaska environmental studies portion of the MMS ESP. Dr. Prentki has been with the Alaska OCS Region since 1981, first in the Environmental Assessment Section and then in the Environmental Studies Section.

ROSCIGNO, Pasquale, F.

Dr. Pat Roscigno is the Chief, Environmental Sciences Section, and Gulf of Mexico OCS Region. He is responsible for managing the Gulf of Mexico OCS Regions' ESP. The Gulf studies support OCS management decisions for the Western, Central, and Eastern Planning Areas of the Gulf. Prior to his current position, he served as the Supervisor for the Gulf's Studies Plan Coordination Unit.

STANG, Paul

Mr. Stang has been MMS's Alaska OCS Regional Supervisor for Leasing and Environment since July 1997. He oversees the region's leasing, environmental studies, and environmental assessment activities. Previously, he managed branches in MMS Headquarters with responsibilities for lease sales, development of MMS's 5-year leasing program, and long term planning. From 1977-1984, before coming to MMS, Mr. Stang handled a variety of offshore oil and gas and coastal zone management issues for the Department of the Interior's Office of Policy Analysis. Prior to that, he headed projects on coastal zone management, interdisciplinary ocean research, and undersea science and technology development for the National Oceanographic and Atmospheric Agency and deep ocean technology development for the Navy's Deep Submergence Systems Program.

TREACY, Steve

Mr. Treacy is Senior Wildlife Biologist, Environmental Studies Section, Alaska OCS Region. He has been responsible for development of Statements of Work and contract administration on many upper trophic species, particularly large whales. Since 1987, he has also been in charge of MMS's inhouse study, Bowhead Whale Aerial Survey Project (BWASP). As BWASP Research Manager and Principal Investigator, he writes and publishes a detailed annual report analyzing each fall migration of bowhead whales across the Alaskan Beaufort Sea.

VESCO, Lynnette L.

Ms. Vesco is the Acting Regional Supervisor, Office of Environmental Evaluation, Pacific OCS Region. She is responsible for managing all aspects of the Environmental Evaluation Program for the MMS Pacific OCS Region, which includes preparing environmental reviews and analyses for the OCS oil and gas activities, ensuring compliance with environmental conditions of project approval, planning and managing the environmental studies program, and communicating with affected customers. She is also responsible for certain lease management functions such as lease adjudication and company financial responsibility. Lynnette has an M.A. in marine biology, and conducted research in rocky intertidal communities for many years.

WASKES, William

Mr. Waskes is an Oceanographer in the Leasing Division, Sand and Gravel Section. He is responsible for supporting the division's Environmental Coordinator in formulating and

recommending biological studies in support of negotiating leases for the use of Federal sand for beach and coastal restoration efforts. He oversees consultations with NOAA Fisheries and Fish and Wildlife Service on essential fish habitat and threatened and endangered species. He assists in the development of NEPA documents and environmental stipulations for negotiated sand leases.

WEDEMEYER, Kate

Ms. Wedemeyer is a Fisheries Oceanographer in the Alaska Environmental Studies office. She is responsible for recommending and overseeing fisheries studies related to Outer Continental Shelf oil and gas leasing activities as an MMS Contracting Officer's Technical Representative. Ms. Wedemeyer also oversees a number of physical oceanography and contaminant study contracts. She has been responsible for Essential Fish Habitat (EFH) analyses and inter-agency coordination on the recent Multi-year Beaufort Sea and Cook Inlet oil and gas lease sale EIS's for the Alaska office.

WILDERMANN, Richard F.

Mr. Wildermann is the Chief, Environmental Division. He provides oversight, policy guidance, and direction for all Offshore environmental issues, including the Environmental Studies Program, environmental analysis activities, and compliance with environmental laws and regulations. Mr. Wildermann has been with the OCS Program since 1978.

WILLIAMS, Dee

Dr. Williams is a Sociocultural Specialist for the Alaska Region of Minerals Management Service. He is responsible for preparing and administering Alaska offshore sociocultural research as Contracting Officer's Technical Representative, and for developing new research designs and anticipated study needs. He has a broad international and intercultural background in development studies and resource management consulting, with many publications in academic journals and book presses.

PRESENTERS

ALEXANDER, Vera

Dr. Alexander is Dean of the School of Fisheries and Ocean Sciences at the University of Alaska Fairbanks, and serves as the Director or the University of Alaska Coastal Marine Institute. She is currently a member of the Marine Mammal Commission and the NOAA Science Advisory Board as well as Chairman of the North Pacific Marine Science Organization (PICES). Her research interests include the study of biological oceanography of high-latitude sea-ice impacted areas, with emphasis on ice biology, primary production and nitrogen dynamics, and high-latitude limnology.

BROWN, John

Mr. Brown is a Senior Project/Program Manager in the Environmental Forensics division with Battelle Coastal Resources and Environmental Management. He has over 20 years' experience in program management, analytical methods, and interpretative techniques for fingerprinting and allocation of hydrocarbon contamination in the environment. Mr. Brown recently rejoined Battelle after serving as a Principal for the Environmental Monitoring and Analysis Unit at Arthur D. Little, Inc., where he was responsible for the overall program management and the technical supervision of the Environmental Chemistry and Forensics Unit. Prior to joining Battelle, Mr. Brown served as Project Manager and Principal Investigator for several programs in Alaska and the Arctic, where projects included the *Exxon Valdez* oil spill Natural Resources Damage Assessment and the Minerals Management Service's Shelikof Strait and Arctic Nearshore Impact Monitoring in the Development Area Programs. Mr. Brown received his bachelor's degree in biology from Hobart College. He can be reached at (781) 895-4847, brownjs@battelle.org.

KELLY, Brendan P.

Dr. Kelly is an Associate Professor of Marine Biology at the University of Alaska Southeast & University of Alaska Fairbanks: Juneau Center, School of Fisheries & Ocean Sciences. He received his Ph.D. from Purdue University and his research focuses on the behavioral ecology of marine mammals, especially ice-associated pinnipeds. He is interested in the adaptations of marine mammals to marine foraging, especially in seasonally ice-covered seas. His research is facilitated by research associates, graduate (Juneau Center School of Fisheries and Ocean Sciences) and undergraduate students, and Labrador retrievers. Currently, they are focusing on five major projects: a long-term study of the behavior of ringed seals in their sub-ice habitat; population biology of Pacific walruses; systematics of the world's walrus populations; population biology of harbor seals in Alaska; and the diving and foraging behavior of sea otters in southeastern Alaska.

OKKONEN, Steve

Dr. Okkonen is a research assistant professor with the Institute of Marine Science, University of Alaska Fairbanks. His research interests include polar and sub-polar oceanography, circulation variability, and satellite remote sensing of the oceans. He received a B.S. in Environmental Sciences Engineering from the University of Michigan in 1976 and a Ph.D. in Physical Oceanography from the University of Alaska Fairbanks in 1993.

RICHARDSON, W. John

Dr. Richardson is Executive Vice President of LGL Ltd., environmental research associates, of King City, Ontario. He is an animal behaviorist by training (Ph.D., Cornell Univ., 1976). Since 1980, he has worked on field studies, reviews and environmental assessments of noise effects on marine mammals, working closely with physical acousticians. Much of this work has concerned reactions of bowhead whales, beluga whales, and seals to underwater noise from offshore oil exploration in the Alaskan and Canadian arctic. This work has included monitoring of reactions to actual industrial activities plus controlled tests of reactions to simulated industrial activities. He has also studied the seasonal distribution, normal behavior, and feeding ecology of bowhead whales and other marine mammals. The Alaska OCS Region of the Minerals Management Service has been one of the primary sponsors of this work from 1980 to date. Dr. Richardson has also prepared impact assessments concerning disturbance and other effects of military test activities on marine mammals and he has participated in many related studies in Canada, the U.S.A., and overseas. He is senior author of the book "Marine Mammals and Noise", published in 1995 by Academic Press and a Fellow of the Acoustical Society of America. From 1992-1994 he was a member of the U.S. National Research Council's Committee on Low-Frequency Sound and Marine Mammals. From 1993-2000 he chaired the advisory board for the Marine Mammal Research Program associated with the Acoustic Thermometry of Ocean Climate program. He has also worked extensively on birds, especially bird migration and bird hazards to aircraft.

ROUSE, Lawrence J.

Mr. Rouse is an Associate Professor in the Coastal Studies Institute and the Department of Oceanography and Coastal Sciences at Louisiana State University. His research interests are in coastal and shelf circulation, estuarine-shelf exchange, and remote sensing analysis of these processes. He is the graduate advisor for the Oceanography Department and director of the Coastal Marine Institute.

RUSSELL, John

Dr. Russell received a Ph.D. in Cultural and Psychological Anthropology from the University of California, San Diego. He has worked as a research anthropologist for the past 27 years, specializing in the community level analysis of the human dimensions of natural resources management. Topics addressed by Dr. Russell's research include: community dependency on National Forest lands; social impacts of changing fisheries policies in Alaska; traditional knowledge and traditional use of National Parks and other public lands; cultural landscape analysis; cultural factors in risk perception associated with locating hazardous facilities, including the Yucca Mountain Nuclear Waste Repository; the role of culture in coping with environmental stressors; the interaction of social and cultural factors in response to disaster events such as the Exxon Valdez oil spill and clean up; and the social impacts of changing land management policies on public lands. His community research experience includes ethnography in both urban and rural areas of Alaska, Hawaii, California, Nevada, Montana, Idaho, Washington, Florida, Louisiana, North Carolina, and Alaska. His international experience includes extended periods of ethnography in communities of western Ireland, Nepal, and India. His current projects include: an assessment of traditional cultural knowledge about Polar Bears among Alaska Natives; social impacts of land management planning for the King Range Natural Conservation Area in California; the potential effects of offshore oil development on bowhead whaling among Alaska Natives; a cultural landscape analysis of the Natchez-trace National Parkway in Mississippi; and consultations with California Native Americans about re-licensing hydro-electric facilities in California.

SCHMIDT, Larry

Mr. Schmidt is a thirty-year career employee with the New Jersey Department of Environmental Protection. He has served in a number of capacities, primarily involved in environmental review of major construction projects, land use planning, permit coordination, program management, and special project assignments. He is responsible for administering the State's Coastal Zone Management Program which includes coastal planning and administering close to \$3 million a year in federal CZM funding. He is the State's representative on the Secretary of the Interior's (federal Cabinet officer to the President of the United States) Outer Continental Shelf Oil and Gas Policy Committee. Committee representatives advise the Secretary of the Interior on the state's interest in activities involving federally licensed exploration and production of offshore oil and gas resources. This includes on-shore impacts to the environment, the economy, infrastructure, and land use. Mr. Schmidt is a graduate of North Carolina State University with a degree in Forestry and has done graduate work in urban and regional planning at Rutgers, the State University of New Jersey.

SCHROEDER, William W.

Dr. Schroeder is a Professor and Coordinator of the Marine Science Program at The University of Alabama, Dauphin Island, Alabama. He has been involved in interdisciplinary oceanographic investigations for over 38 years and has conducted

research along the coast, on the continental margins and in the deep water of the northern Gulf of Mexico for the past 29 years. In addition he has participated in international research endeavors in the Bahamas, Caribbean, Gulf of Papua, Azov Sea, Australia and South Africa. He has authored and coauthored over 125 scientific publications. Currently his research activities include: 1) coupled biological-geological-physical studies of deep-water corals in the Gulf of Mexico; 2) validation of distributed marine-environment forecast systems; 3) Late Quaternary sea level and paleoceanography investigations of hardbottom sites in the northern Gulf of Mexico; 4) an integrated study of physical and biological processes along the west coast of Australia; and 5) model validation of the coupled katabatic wind, coastal ocean and ice systems in Antarctica.

WEINGARTNER, Thomas J.

Dr. Weingartner's specialties include physical oceanography of the Arctic Ocean and its adjacent shelves, physical oceanographic effects on marine ecosystems. His approach is mainly observational involving research cruises and the use of moored instruments that measure ocean velocity, temperature, and salinity periodically (usually hourly) for up to a year or more at specific locations in the water column.